SEQUENCE LISTING

<110> Korneluk, Robert G
      MacKenzie, Alexander E
      Liston, Peter
      Baird, Stephen
      Tsang, Benjamin K
      Pratt, Christine

<120> DETECTION AND MODULATION OF IAPS AND
   NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
   DISEASE

<130> 07891/009004

<140> US 09/974,592
<141> 2001-10-09

<150> US 09/617,053
<151> 2000-07-14

<150> US 08/800,929
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      41, 42, and 45 can be any amino acid; Xaa at 8 can
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<223> Based on consensus from Homo sapiens and Mus
      musculus

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       47, 49, 50, 51, 53, 54, 55, 56, 57, 59, 60, 61,
       62, 64 and 66 can be any amino acid; Xaa at 13, 16
       and 17 can be any amino acid or absent.

<223> Based on consensus from Homo sapiens and Mus
       musculus

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            20   25   30
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Tyr Leu Glu Asn Ser Ala Thr Gln Ser Thr Asn Ser Gly Ile Gln Asn
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Gly Gln Tyr Lys Val Glu Asn Tyr Leu Gly Ser Arg Asp His Phe Ala
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Leu Asp Arg Pro Ser Glu Thr His Ala Asp Tyr Leu Leu Arg Thr Gly
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Gln Val Val Asp Ile Ser Asp Thr Ile Tyr Pro Arg Asn Pro Ala Met
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Tyr Cys Glu Glu Ala Arg Leu Lys Ser Phe Gln Asn Trp Pro Asp Tyr
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Lys Glu Ile Ser Thr Glu Glu Gln Leu Arg Arg Leu Gln Glu Glu Lys
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<210> 6
<211> 604
<212> PRT
<213> Homo sapiens

<400> 6
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            20                  25                  30
Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro Val Ser Glu Arg
        35                  40                  45
Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val Asn Asp Lys Val
    50                  55                  60
Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp Lys Arg Gly Asp
65                  70                  75                  80
Ser Pro Thr Glu Lys His Lys Lys Leu Tyr Pro Ser Cys Arg Phe Val
                85                  90                  95
Gln Ser Leu Asn Ser Val Asn Asn Leu Glu Ala Thr Ser Gln Pro Thr
            100                 105                 110
Phe Pro Ser Ser Val Thr His Ser Thr His Ser Leu Leu Pro Gly Thr
        115                 120                 125
Glu Asn Ser Gly Tyr Phe Arg Gly Ser Tyr Ser Asn Ser Pro Ser Asn
    130                 135                 140
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Pro Val Asn Ser Arg Ala Asn Gln Glu Phe Ser Ala Leu Met Arg Ser
145             150             155             160
Ser Tyr Pro Cys Pro Met Asn Asn Glu Asn Ala Arg Leu Leu Thr Phe
            165             170             175
Gln Thr Trp Pro Leu Thr Phe Leu Ser Pro Thr Asp Leu Ala Arg Ala
        180             185             190
Gly Phe Tyr Tyr Ile Gly Pro Gly Asp Arg Val Ala Cys Phe Ala Cys
    195             200             205
Gly Gly Lys Leu Ser Asn Trp Glu Pro Lys Asp Asn Ala Met Ser Glu
    210             215             220
His Leu Arg His Phe Pro Lys Cys Pro Phe Ile Glu Asn Gln Leu Gln
225             230             235             240
Asp Thr Ser Arg Tyr Thr Val Ser Asn Leu Ser Met Gln Thr His Ala
            245             250             255
Ala Arg Phe Lys Thr Phe Phe Asn Trp Pro Ser Ser Val Leu Val Asn
            260             265             270
Pro Glu Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Gly Asn Ser Asp
        275             280             285
Asp Val Lys Cys Phe Cys Cys Asp Gly Gly Leu Arg Cys Trp Glu Ser
    290             295             300
Gly Asp Asp Pro Trp Val Gln His Ala Lys Trp Phe Pro Arg Cys Glu
305             310             315             320
Tyr Leu Ile Arg Ile Lys Gly Gln Glu Phe Ile Arg Gln Val Gln Ala
            325             330             335
Ser Tyr Pro His Leu Leu Glu Gln Leu Leu Ser Thr Ser Asp Ser Pro
            340             345             350
Gly Asp Glu Asn Ala Glu Ser Ser Ile Ile His Leu Glu Pro Gly Glu
        355             360             365
Asp His Ser Glu Asp Ala Ile Met Met Asn Thr Pro Val Ile Asn Ala
    370             375             380
Ala Val Glu Met Gly Phe Ser Arg Ser Leu Val Lys Gln Thr Val Gln
385             390             395             400
Arg Lys Ile Leu Ala Thr Gly Glu Asn Tyr Arg Leu Val Asn Asp Leu
            405             410             415
Val Leu Asp Leu Leu Asn Ala Glu Asp Glu Ile Arg Glu Glu Glu Arg
            420             425             430
Glu Arg Ala Thr Glu Glu Lys Glu Ser Asn Asp Leu Leu Leu Ile Arg
    435             440             445
Lys Asn Arg Met Ala Leu Phe Gln His Leu Thr Cys Val Ile Pro Ile
    450             455             460
Leu Asp Ser Leu Leu Thr Ala Gly Ile Ile Asn Glu Gln Glu His Asp
465             470             475             480
Val Ile Lys Gln Lys Thr Gln Thr Ser Leu Gln Ala Arg Glu Leu Ile
            485             490             495
Asp Thr Ile Leu Val Lys Gly Asn Ile Ala Ala Thr Val Phe Arg Asn
        500             505             510
Ser Leu Gln Glu Ala Glu Ala Val Leu Tyr Glu His Leu Phe Val Gln
    515             520             525
Gln Asp Ile Lys Tyr Ile Pro Thr Glu Asp Val Ser Asp Leu Pro Val
    530             535             540
Glu Glu Gln Leu Arg Arg Leu Pro Glu Glu Arg Thr Cys Lys Val Cys
545             550             555             560
Met Asp Lys Glu Val Ser Ile Val Phe Ile Pro Cys Gly His Leu Val
            565             570             575
Val Cys Lys Asp Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys Arg
            580             585             590
Ser Thr Ile Lys Gly Thr Val Arg Thr Phe Leu Ser
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<210> 7
<211> 3732
<212> DNA
<213> Homo sapiens

<400> 7
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attatggaga tctcgaaact ttataaaggg atatagtttg aattctatgg agtgtaattt 240
tgtgtatgaa ttatattttt aaaacattga agagtttca gaaagaaggc tagtagagtt 300
gattactgat actttatgct aagcagtact tttttggtag tacaatattt tgttaggcgt 360
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tgcagtgtaa aaagtgtgct gtggaaattt tatggctaac taagtttatg gagaaaatac 540
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gcaggaaatg gaaacaaata caaatgatat ttaacaaaga tagagtttac agttttgaa 660
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<210> 8
<211> 618
<212> PRT
<213> Homo sapiens

<400> 8

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            20                  25                  30
Asn Ser Asn Lys Gln Lys Met Lys Tyr Asp Phe Ser Cys Glu Leu Tyr
        35                  40                  45
Arg Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro Val Ser Glu
    50                  55                  60
Arg Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val Asn Asp Lys
65                  70                  75                  80
Val Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp Lys Leu Gly
                85                  90                  95
Asp Ser Pro Ile Gln Lys His Lys Gln Leu Tyr Pro Ser Cys Ser Phe
            100                 105                 110
Ile Gln Asn Leu Val Ser Ala Ser Leu Gly Ser Thr Ser Lys Asn Thr
        115                 120                 125
Ser Pro Met Arg Asn Ser Phe Ala His Ser Leu Ser Pro Thr Leu Glu
    130                 135                 140
His Ser Ser Leu Phe Ser Gly Ser Tyr Ser Ser Leu Pro Pro Asn Pro
145                 150                 155                 160
Leu Asn Ser Arg Ala Val Glu Asp Ile Ser Ser Ser Arg Thr Asn Pro
                165                 170                 175
Tyr Ser Tyr Ala Met Ser Thr Glu Glu Ala Arg Phe Leu Thr Tyr His
            180                 185                 190
Met Trp Pro Leu Thr Phe Leu Ser Pro Ser Glu Leu Ala Arg Ala Gly
        195                 200                 205
Phe Tyr Tyr Ile Gly Pro Gly Asp Arg Val Ala Cys Phe Ala Cys Gly
    210                 215                 220
Gly Lys Leu Ser Asn Trp Glu Pro Lys Asp Asp Ala Met Ser Glu His
225                 230                 235                 240
Arg Arg His Phe Pro Asn Cys Pro Phe Leu Glu Asn Ser Leu Glu Thr
                245                 250                 255
Leu Arg Phe Ser Ile Ser Asn Leu Ser Met Gln Thr His Ala Ala Arg
            260                 265                 270
Met Arg Thr Phe Met Tyr Trp Pro Ser Ser Val Pro Val Gln Pro Glu
        275                 280                 285
Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Gly Arg Asn Asp Asp Val
    290                 295                 300
Lys Cys Phe Gly Cys Asp Gly Gly Leu Arg Cys Trp Glu Ser Gly Asp
305                 310                 315                 320
Asp Pro Trp Val Glu His Ala Lys Trp Phe Pro Arg Cys Glu Phe Leu
                325                 330                 335
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Ile Arg Met Lys Gly Gln Glu Phe Val Asp Glu Ile Gln Gly Arg Tyr
            340                     345             350
Pro His Leu Leu Glu Gln Leu Leu Ser Thr Ser Asp Thr Thr Gly Glu
            355             360             365
Glu Asn Ala Asp Pro Pro Ile Ile His Phe Gly Pro Gly Glu Ser Ser
    370             375             380
Ser Glu Asp Ala Val Met Met Asn Thr Pro Val Val Lys Ser Ala Leu
385             390             395             400
Glu Met Gly Phe Asn Arg Asp Leu Val Lys Gln Thr Val Leu Ser Lys
            405             410             415
Ile Leu Thr Thr Gly Glu Asn Tyr Lys Thr Val Asn Asp Ile Val Ser
            420             425             430
Ala Leu Leu Asn Ala Glu Asp Glu Lys Arg Glu Glu Glu Lys Glu Lys
            435             440             445
Gln Ala Glu Glu Met Ala Ser Asp Asp Leu Ser Leu Ile Arg Lys Asn
    450             455             460
Arg Met Ala Leu Phe Gln Gln Leu Thr Cys Val Leu Pro Ile Leu Asp
465             470             475             480
Asn Leu Leu Lys Ala Asn Val Ile Asn Lys Gln Glu His Asp Ile Ile
            485             490             495
Lys Gln Lys Thr Gln Ile Pro Leu Gln Ala Arg Glu Leu Ile Asp Thr
            500             505             510
Ile Trp Val Lys Gly Asn Ala Ala Ala Asn Ile Phe Lys Asn Cys Leu
            515             520             525
Lys Glu Ile Asp Ser Thr Leu Tyr Lys Asn Leu Phe Val Asp Lys Asn
    530             535             540
Met Lys Tyr Ile Pro Thr Glu Asp Val Ser Gly Leu Ser Leu Glu Glu
545             550             555             560
Gln Leu Arg Arg Leu Gln Glu Glu Arg Thr Cys Lys Val Cys Met Asp
            565             570             575
Lys Glu Val Ser Val Val Phe Ile Pro Cys Gly His Leu Val Val Cys
            580             585             590
Gln Glu Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys Arg Gly Ile
    595             600             605
Ile Lys Gly Thr Val Arg Thr Phe Leu Ser
    610             615
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<210> 9
<211> 2691
<212> DNA
<213> Mus musculus

<400> 9
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tgcatatttt atgctgcttt catgttttc ctaattaatg acttcacatg tttaatattt 180
ataatttttc tgtcatagtt tccatattta tataaaatga atacttaaga tcagtaattc 240
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tcgttgctaa agcactttcc taaaatgcaa aaggccctat gatggatccc tagtacttat 360
ttaagtgaga gagaaacagg ctggggggtgt aggtctgtta gagcatgtgt ttggcattat 420
gtgaagccca aacactaaaa aaggagaaca aacaaaagcg cagactttaa aactcaagtg 480
gtttggtaat gtacgactct actgtttaga attaaaatgt gtcttagtta ttgtgccatt 540
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ccaataagga tgaagaattt gtagaagagt ttaatagatt aaaaacattt gctaacttcc 780
caagtagtag tcctgtttca gcatcaacat ggcgcgagc tgggtttctt tataccggtg 840
aaggagacac cgtgcaatgt ttcagttgtc atgcggcaat agatagatgg cagtatggag 900
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<211> 496
<212> PRT
<213> Mus musculus

<400> 10
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Thr Asn Lys Asp Glu Glu Phe Val Glu Glu Phe Asn Arg Leu Lys Thr
            20                  25                  30
Phe Ala Asn Phe Pro Ser Ser Ser Pro Val Ser Ala Ser Thr Leu Ala
        35                  40                  45
Arg Ala Gly Phe Leu Tyr Thr Gly Glu Gly Asp Thr Val Gln Cys Phe
    50                  55                  60
Ser Cys His Ala Ala Ile Asp Arg Trp Gln Tyr Gly Asp Ser Ala Val
65                  70                  75                  80
Gly Arg His Arg Arg Ile Ser Pro Asn Cys Arg Phe Ile Asn Gly Phe
                85                  90                  95
Tyr Phe Glu Asn Gly Ala Ala Gln Ser Thr Asn Pro Gly Ile Gln Asn
            100                 105                 110
Gly Gln Tyr Lys Ser Glu Asn Cys Val Gly Asn Arg Asn Pro Phe Ala
        115                 120                 125
Pro Asp Arg Pro Pro Glu Thr His Ala Asp Tyr Leu Leu Arg Thr Gly
    130                 135                 140
Gln Val Val Asp Ile Ser Asp Thr Ile Tyr Pro Arg Asn Pro Ala Met
145                 150                 155                 160
Cys Ser Glu Glu Ala Arg Leu Lys Ser Phe Gln Asn Trp Pro Asp Tyr
                165                 170                 175
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Ala His Leu Thr Pro Arg Glu Leu Ala Ser Ala Gly Leu Tyr Tyr Thr
            180                 185                 190
Gly Ala Asp Asp Gln Val Gln Cys Phe Cys Cys Gly Gly Lys Leu Lys
            195                 200                 205
Asn Trp Glu Pro Cys Asp Arg Ala Trp Ser Glu His Arg Arg His Phe
            210                 215                 220
Pro Asn Cys Phe Phe Val Leu Gly Arg Asn Val Asn Val Arg Ser Glu
225                 230                 235                 240
Ser Gly Val Ser Ser Asp Arg Asn Phe Pro Asn Ser Thr Asn Ser Pro
            245                 250                 255
Arg Asn Pro Ala Met Ala Glu Tyr Glu Ala Arg Ile Val Thr Phe Gly
            260                 265                 270
Thr Trp Ile Tyr Ser Val Asn Lys Glu Gln Leu Ala Arg Ala Gly Phe
            275                 280                 285
Tyr Ala Leu Gly Glu Gly Asp Lys Val Lys Cys Phe His Cys Gly Gly
            290                 295                 300
Gly Leu Thr Asp Trp Lys Pro Ser Glu Asp Pro Trp Asp Gln His Ala
305                 310                 315                 320
Lys Cys Tyr Pro Gly Cys Lys Tyr Leu Leu Asp Glu Lys Gly Gln Glu
            325                 330                 335
Tyr Ile Asn Asn Ile His Leu Thr His Pro Leu Glu Glu Ser Leu Gly
            340                 345                 350
Arg Thr Ala Glu Lys Thr Pro Pro Leu Thr Lys Lys Ile Asp Asp Thr
            355                 360                 365
Ile Phe Gln Asn Pro Met Val Gln Glu Ala Ile Arg Met Gly Phe Ser
            370                 375                 380
Phe Lys Asp Leu Lys Lys Thr Met Glu Glu Lys Ile Gln Thr Ser Gly
385                 390                 395                 400
Ser Ser Tyr Leu Ser Leu Glu Val Leu Ile Ala Asp Leu Val Ser Ala
            405                 410                 415
Gln Lys Asp Asn Thr Glu Asp Glu Ser Ser Gln Thr Ser Leu Gln Lys
            420                 425                 430
Asp Ile Ser Thr Glu Glu Gln Leu Arg Arg Leu Gln Glu Glu Lys Leu
            435                 440                 445
Ser Lys Ile Cys Met Asp Arg Asn Ile Ala Ile Val Phe Phe Pro Cys
            450                 455                 460
Gly His Leu Ala Thr Cys Lys Gln Cys Ala Glu Ala Val Asp Lys Cys
465                 470                 475                 480
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<210> 11
<211> 2676
<212> DNA
<213> Mus musculus

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ccatggagaa gcacagaaag ttgtacccca gctgcaactt gtacagactt tgaatccag 600
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<211> 600
<212> PRT
<213> Mus musculus

<400> 12

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            20                  25                  30
Thr Tyr Ser Ala Phe Pro Arg Gly Val Pro Val Ser Glu Arg Ser Leu
        35                  40                  45
Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Ala Asn Asp Lys Val Lys Cys
    50                  55                  60
Phe Cys Cys Gly Leu Met Leu Asp Asn Trp Lys Gln Gly Asp Ser Pro
65              70                  75                  80
Met Glu Lys His Arg Lys Leu Tyr Pro Ser Cys Asn Phe Val Gln Thr
                85                  90                  95
Leu Asn Pro Ala Asn Ser Leu Glu Ala Ser Pro Arg Pro Ser Leu Pro
            100                 105                 110
Ser Thr Ala Met Ser Thr Met Pro Leu Ser Phe Ala Ser Ser Glu Asn
        115                 120                 125
Thr Gly Tyr Phe Ser Gly Ser Tyr Ser Ser Phe Pro Ser Asp Pro Val
    130                 135                 140
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Asn Phe Arg Ala Asn Gln Asp Cys Pro Ala Leu Ser Thr Ser Pro Tyr
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His Phe Ala Met Asn Thr Glu Lys Ala Arg Leu Leu Thr Tyr Glu Thr
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Trp Pro Leu Ser Phe Leu Ser Pro Ala Lys Leu Ala Lys Ala Gly Phe
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Tyr Tyr Ile Gly Pro Gly Asp Arg Val Ala Cys Phe Ala Cys Asp Gly
                195   200   205
Lys Leu Ser Asn Trp Glu Arg Lys Asp Asp Ala Met Ser Glu His Gln
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Arg His Phe Pro Ser Cys Pro Phe Leu Lys Asp Leu Gly Gln Ser Ala
225   230   235   240
Ser Arg Tyr Thr Val Ser Asn Leu Ser Met Gln Thr His Ala Ala Arg
                245   250   255
Ile Arg Thr Phe Ser Asn Trp Pro Ser Ser Ala Leu Val His Ser Gln
                260   265   270
Glu Leu Ala Ser Ala Gly Phe Tyr Tyr Thr Gly His Ser Asp Asp Val
        275   280   285
Lys Cys Phe Cys Cys Asp Gly Gly Leu Arg Cys Trp Glu Ser Gly Asp
        290   295   300
Asp Pro Trp Val Glu His Ala Lys Trp Phe Pro Arg Cys Glu Tyr Leu
305   310   315   320
Leu Arg Ile Lys Gly Gln Glu Phe Val Ser Gln Val Gln Ala Gly Tyr
                325   330   335
Pro His Leu Leu Glu Gln Leu Leu Ser Thr Ser Asp Ser Pro Glu Asp
                340   345   350
Glu Asn Ala Asp Ala Ala Ile Val His Phe Gly Pro Gly Glu Ser Ser
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Glu Asp Val Val Met Met Ser Thr Pro Val Val Lys Ala Ala Leu Glu
        370   375   380
Met Gly Phe Ser Arg Ser Leu Val Arg Gln Thr Val Gln Arg Gln Ile
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Leu Ala Thr Gly Glu Asn Tyr Arg Thr Val Ser Asp Leu Val Ile Gly
                405   410   415
Leu Leu Asp Ala Glu Asp Glu Met Arg Glu Glu Gln Met Glu Gln Ala
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Ala Glu Glu Glu Glu Ser Asp Asp Leu Ala Leu Ile Arg Lys Asn Lys
        435   440   445
Met Val Leu Phe Gln His Leu Thr Cys Val Thr Pro Met Leu Tyr Cys
        450   455   460
Leu Leu Ser Ala Arg Ala Ile Thr Glu Gln Glu Cys Asn Ala Val Lys
465   470   475   480
Gln Lys Pro His Thr Leu Gln Ala Ser Thr Leu Ile Asp Thr Val Leu
                485   490   495
Ala Lys Gly Asn Thr Ala Ala Thr Ser Phe Arg Asn Ser Leu Arg Glu
                500   505   510
Ile Asp Pro Ala Leu Tyr Arg Asp Ile Phe Val Gln Gln Asp Ile Arg
                515   520   525
Ser Leu Pro Thr Asp Asp Ile Ala Ala Leu Pro Met Glu Glu Gln Leu
        530   535   540
Arg Lys Leu Gln Glu Glu Arg Met Cys Lys Val Cys Met Asp Arg Glu
545   550   555   560
Val Ser Ile Val Phe Ile Pro Cys Gly His Leu Val Val Cys Lys Asp
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Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys Arg Gly Thr Ile Lys
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Gly Thr Val Arg Thr Phe Leu Ser
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<212> DNA
<213> Mus musculus

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<211> 612
<212> PRT
<213> Mus musculus

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Lys Glu Ser Glu Glu Lys Met Lys Phe Asp Phe Ser Cys Glu Leu Tyr
        35   40   45
Arg Met Ser Thr Tyr Ser Ala Phe Pro Arg Gly Val Pro Val Ser Glu
    50   55   60
Arg Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val Asn Asp Lys
65   70   75   80
Val Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp Lys Gln Gly
                85   90   95
Asp Ser Pro Val Glu Lys His Arg Gln Phe Tyr Pro Ser Cys Ser Phe
            100   105   110
Val Gln Thr Leu Leu Ser Ala Ser Leu Gln Ser Pro Ser Lys Asn Met
        115   120   125
Ser Pro Val Lys Ser Arg Phe Ala His Ser Ser Pro Leu Glu Arg Gly
    130   135   140
Gly Ile His Ser Asn Leu Cys Ser Ser Pro Leu Asn Ser Arg Ala Val
145   150   155   160
Glu Asp Phe Ser Ser Arg Met Asp Pro Cys Ser Tyr Ala Met Ser Thr
                165   170   175
Glu Glu Ala Arg Phe Leu Thr Tyr Ser Met Trp Pro Leu Ser Phe Leu
            180   185   190
Ser Pro Ala Glu Leu Ala Arg Ala Gly Phe Tyr Tyr Ile Gly Pro Gly
    195   200   205
Asp Arg Val Ala Cys Phe Ala Cys Gly Gly Lys Leu Ser Asn Trp Glu
    210   215   220
Pro Lys Asp Asp Ala Met Ser Glu His Arg Arg His Phe Pro His Cys
225   230   235   240
Pro Phe Leu Glu Asn Thr Ser Glu Thr Gln Arg Phe Ser Ile Ser Asn
                245   250   255
Leu Ser Met Gln Thr His Ser Ala Arg Leu Arg Thr Phe Leu Tyr Trp
            260   265   270
Pro Pro Ser Val Pro Val Gln Pro Glu Gln Leu Ala Ser Ala Gly Phe
    275   280   285
Tyr Tyr Val Asp Arg Asn Asp Asp Val Lys Cys Phe Cys Cys Asp Gly
    290   295   300
Gly Leu Arg Cys Trp Glu Pro Gly Asp Asp Pro Trp Ile Glu His Ala
305   310   315   320
Lys Trp Phe Pro Arg Cys Glu Phe Leu Ile Arg Met Lys Gly Gln Glu
                325   330   335
Phe Val Asp Glu Ile Gln Ala Arg Tyr Pro His Leu Leu Glu Gln Leu
            340   345   350
Leu Ser Thr Ser Asp Thr Pro Gly Glu Glu Asn Ala Asp Pro Thr Glu
        355   360   365
Thr Val Val His Phe Gly Pro Gly Glu Ser Ser Lys Asp Val Val Met
    370   375   380
Met Ser Thr Pro Val Val Lys Ala Ala Leu Glu Met Gly Phe Ser Arg
385   390   395   400
Ser Leu Val Arg Gln Thr Val Gln Arg Gln Ile Leu Ala Thr Gly Glu
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Asn Tyr Arg Thr Val Asn Asp Ile Val Ser Val Leu Leu Asn Ala Glu

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          435                      440                      445
Ser Gly Asp Leu Ser Leu Ile Arg Lys Asn Arg Met Ala Leu Phe Gln
    450                      455                      460
Gln Leu Thr His Val Leu Pro Ile Leu Asp Asn Leu Leu Glu Ala Ser
465                      470                      475                      480
Val Ile Thr Lys Gln Glu His Asp Ile Ile Arg Gln Lys Thr Gln Ile
              485                      490                      495
Pro Leu Gln Ala Arg Glu Leu Ile Asp Thr Val Leu Val Lys Gly Asn
              500                      505                      510
Ala Ala Ala Asn Ile Phe Lys Asn Ser Leu Lys Glu Ile Asp Ser Thr
          515                      520                      525
Leu Tyr Glu Asn Leu Phe Val Glu Lys Asn Met Lys Tyr Ile Pro Thr
    530                      535                      540
Glu Asp Val Ser Gly Leu Ser Leu Glu Glu Gln Leu Arg Arg Leu Gln
545                      550                      555                      560
Glu Glu Arg Thr Cys Lys Val Cys Met Asp Arg Glu Val Ser Ile Val
              565                      570                      575
Phe Ile Pro Cys Gly His Leu Val Val Cys Gln Glu Cys Ala Pro Ser
          580                      585                      590
Leu Arg Lys Cys Pro Ile Cys Arg Gly Thr Ile Lys Gly Thr Val Arg
          595                      600                      605
Thr Phe Leu Ser
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<210> 15
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<212> DNA
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens sequence

<400> 15
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<210> 16
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens sequence

<400> 16
agatgaccac aaggaataaa cacta                                            25

<210> 17
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens sequence

<400> 17
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